

MEI Workshop

AIBM-Jahrestagung 2012
Frankfurt am Main
Universitätsbibliothek Johann Christian Senckenberg
18. September 2012
14:00–18:00 Uhr

Dozenten:

Maja Hartwig, Johannes Kepper, Kristina Richts
(Universität Paderborn, Musikwissenschaftliches Seminar Detmold/Paderborn)

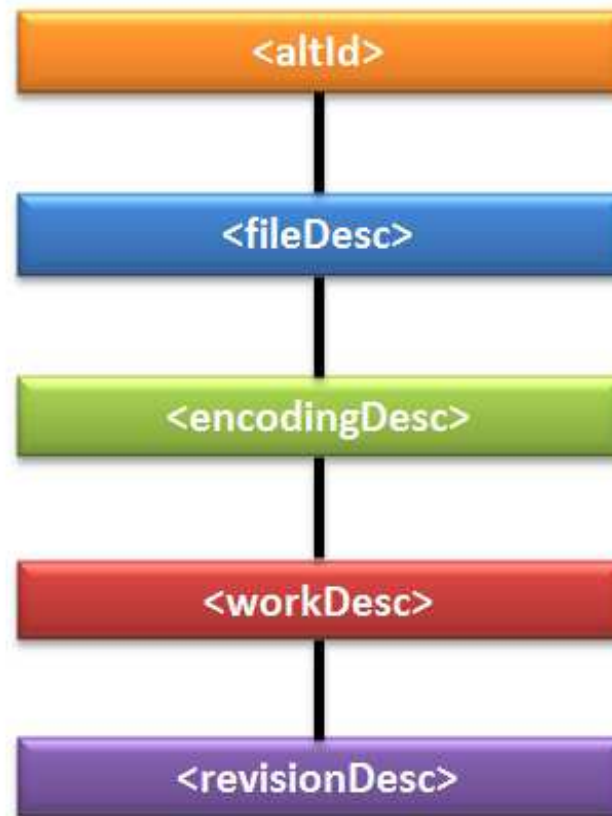
<workshop>

MEI-Header

```
<meiHead></meiHead>
```

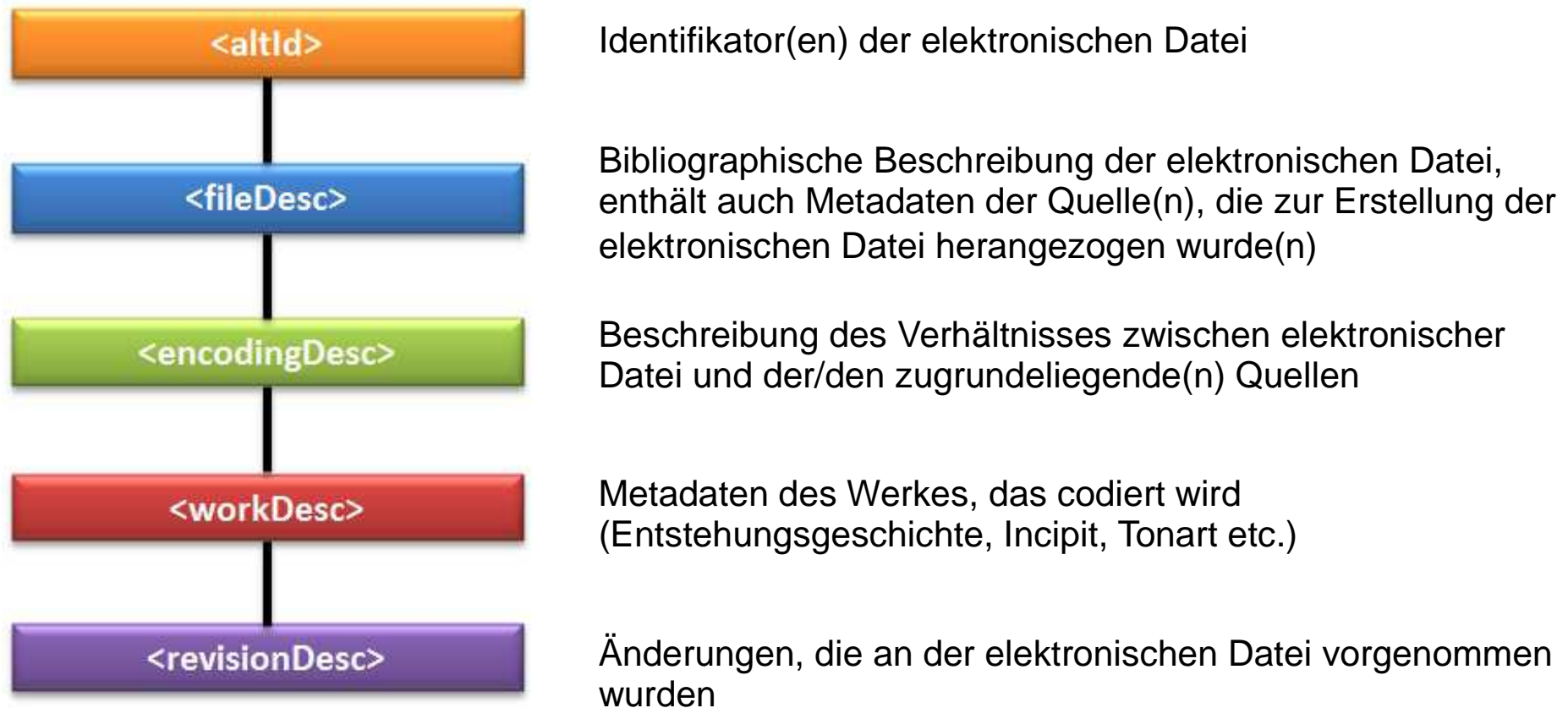
Header: Grundlagen

Bestandteile des Headers



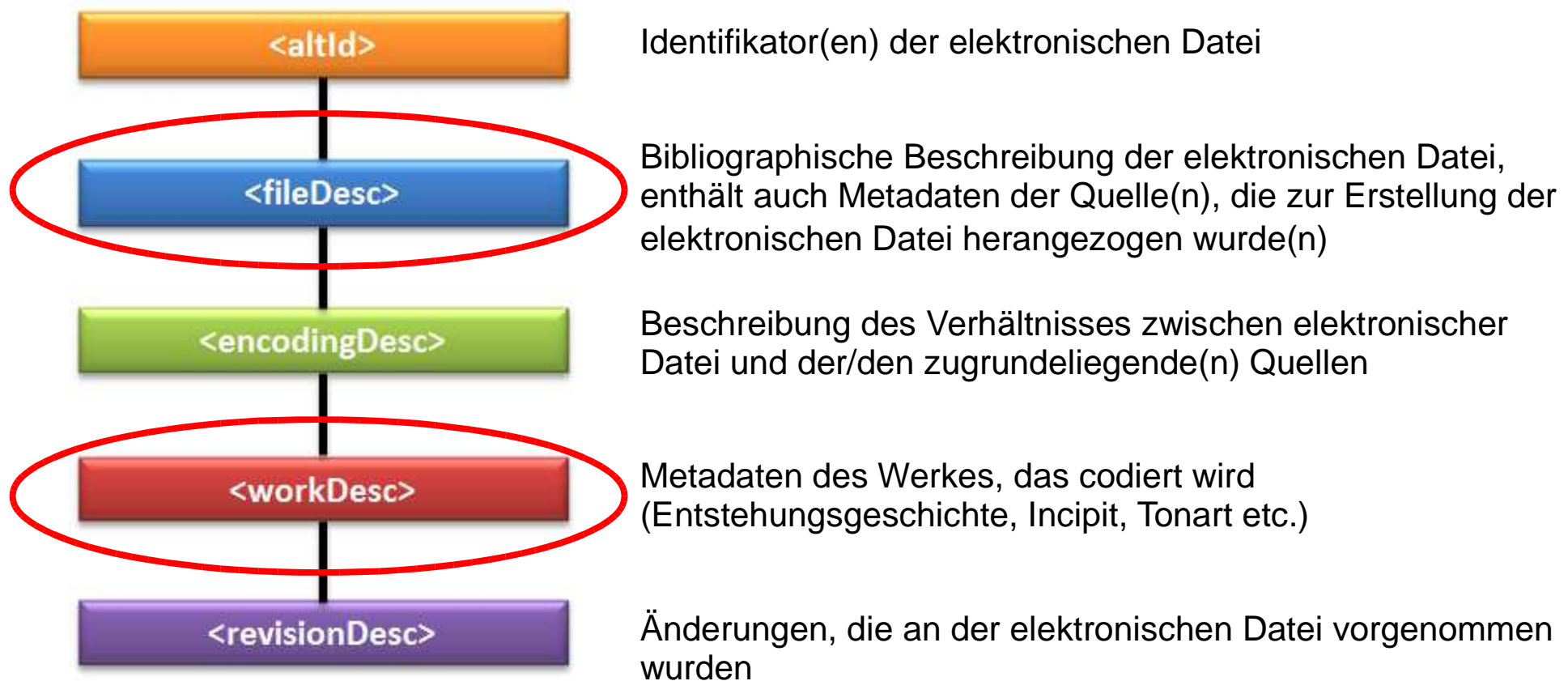
Header: Grundlagen

Bestandteile des Headers



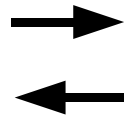
Header: Grundlagen

Bestandteile des Headers



Header: Grundlagen

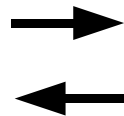
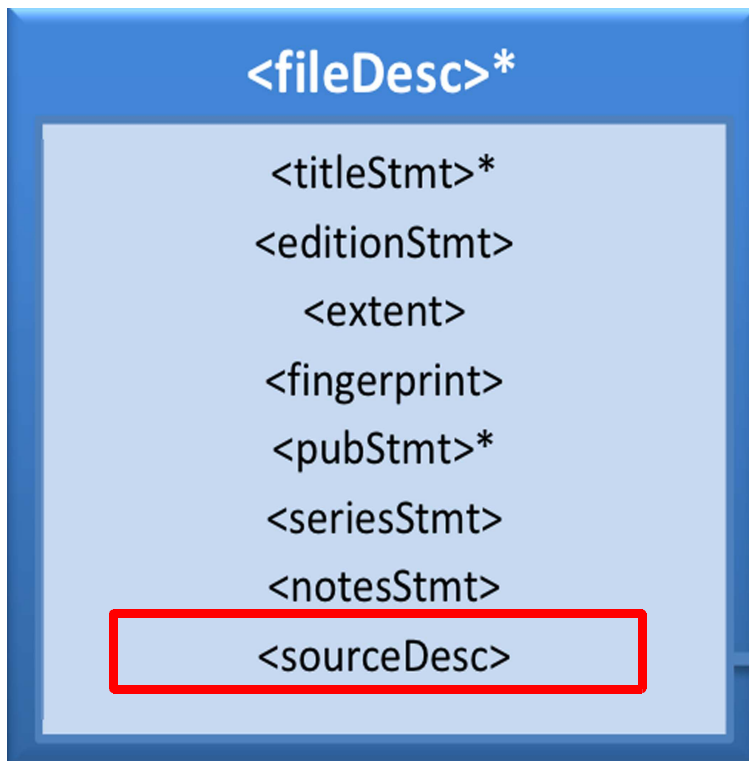
File Description



```
Schumann_Schmetterling_vollständig.mei - X
1 <?xml version="1.0" encoding="UTF-8"?>
2 <?xml-model href="mei-all.rng" type="application/xml" schematypens="http://relaxng.org/ns/structure/1.0"?>
3 <mei xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.music-encoding.org/ns/mei"
4   meiversion="2012">
5   <meiHead>
6     <fileDesc>
7       <titleStmt>
8         <title>Lieder-Album für die Jugend für Singstimme(n) und Klavier; op. 79 : an
9           electronic transcription</title>
10      <respStmt>
11        <resp>Composed by:</resp>
12        <persName role="composer" authority="GND" authURI="http://d-nb.info/gnd"
13          dbkey="118611666">Robert Schumann</persName>
14        <resp>Machine-readable transcription by:</resp>
15        <persName role="encoder">Kristina Richts</persName>
16      </respStmt>
17    </titleStmt>
18    <pubStmt>
19      <unpub/>
20    </pubStmt>
21    <sourceDesc>
22      <source n="1" xml:id="op79">
23        <titleStmt>
24          <title type="main">Lieder-Album für die Jugend für Singstimme(n) und Klavier
25            op. 79</title>
26          <title type="uniform">Lieder für die Jugend</title>
27        <respStmt>
28          <persName role="composer" authority="GND" authURI="http://d-nb.info/gnd"
29            dbkey="118611666">Robert Schumann</persName>
30          <resp>Herausgegeben von</resp>
31          <persName role="editor" authURI="http://d-nb.info/gnd" authority="GND"
32            dbkey="10400097X">Ulrich Mahlert</persName>
33        </respStmt>
34      </titleStmt>
35      <editionStmt>
36        <edition>Reprint der Erstausgabe Leipzig 1849</edition>
37      </editionStmt>
38      <pubStmt>
39        <respStmt>
40          <corpName role="publisher" authority="GND"
41            authURI="http://d-nb.info/gnd" dbkey="330001418">Breitkopf und
42            Härtel</corpName>
43          <resp>Druck:</resp>
```

Header: Grundlagen

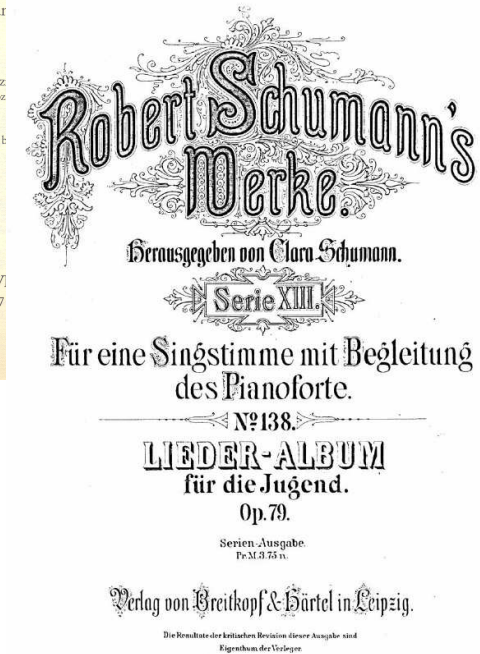
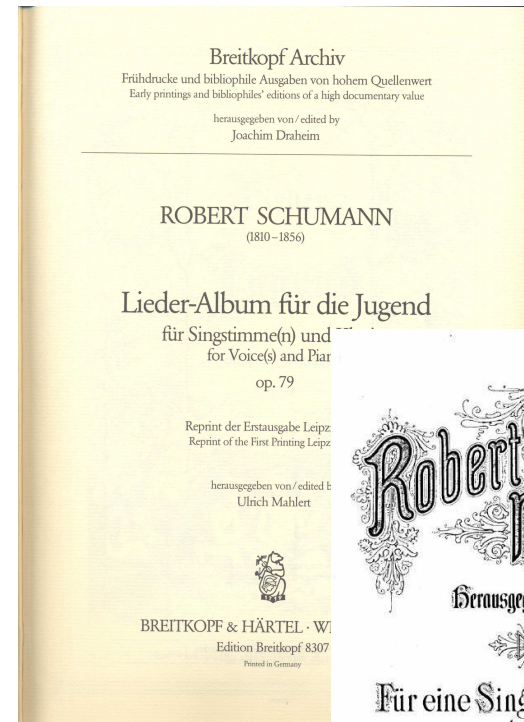
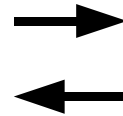
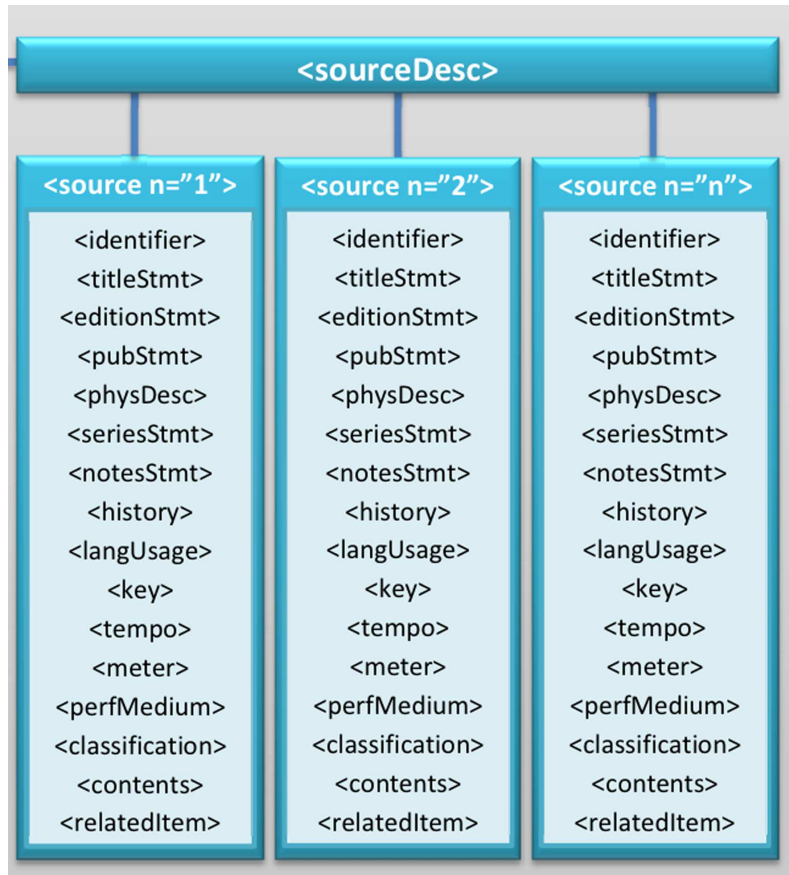
File Description



```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <?xml-model href="mei-all.rng" type="application/xml" schematypens="http://relaxng.org/ns/structure/1.0"?>
3 <mei xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.music-encoding.org/ns/mei"
4   mei:version="2012">
5   <meiHead>
6     <fileDesc>
7       <titleStmt>
8         <title>Lieder-Album für die Jugend für Singstimme(n) und Klavier; op. 79 : an
9           electronic transcription</title>
10      <respStmt>
11        <resp>Composed by:</resp>
12        <persName role="composer" authority="GND" authURI="http://d-nb.info/gnd"
13          dbkey="118611666">Robert Schumann</persName>
14        <resp>Machine-readable transcription by:</resp>
15        <persName role="encoder">Kristina Richts</persName>
16      </respStmt>
17    </titleStmt>
18    <pubStmt>
19      <unpub/>
20    </pubStmt>
21    <sourceDesc>
22      <source n="1" xml:id="op79">
23        <titleStmt>
24          <title type="main">Lieder-Album für die Jugend für Singstimme(n) und Klavier
25            op. 79</title>
26          <title type="uniform">Lieder für die Jugend</title>
27        <respStmt>
28          <persName role="composer" authority="GND" authURI="http://d-nb.info/gnd"
29            dbkey="118611666">Robert Schumann</persName>
30          <resp>Herausgegeben von</resp>
31          <persName role="editor" authURI="http://d-nb.info/gnd" authority="GND"
32            dbkey="10400097X">Ulrich Mahlert</persName>
33        </respStmt>
34      </titleStmt>
35      <editionStmt>
36        <edition>Reprint der Erstausgabe Leipzig 1849</edition>
37      </editionStmt>
38      <pubStmt>
39        <respStmt>
40          <corpName role="publisher" authority="GND"
41            authURI="http://d-nb.info/gnd" dbkey="330001418">Breitkopf und
42            Härtel</corpName>
43          <resp>Druck:</resp>
```


Header: Grundlagen

Source Description

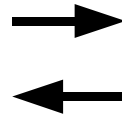


Header: Grundlagen

Work Description

<workDesc>

<identifier>
<titleStmt>
<history>
<langUsage>
<key>
<tempo>
<meter>
<perfMedium>
<notesStmt>
<classification>
<castList>
<incip>
<contents>
<relatedItem>



4
2.
SCHMETTERLING.
Schnell.
Singstimme.
V. 1. O Schmet . ter . ling sprich,
V. 2. Jetzt fern und dann nah,
V. 3. Ich thu' dir kein Leid:
V. 4. So spräch' ich zu dir:
Pianoforte.
1. was flie . hest du mich ? wa - rum doch
2. jetzt hier und dann da - ich will dich
3. o bleib' al - le - zeit! und wär' ich
4. komm, komm doch zu mir! ich schenk' dir
1. so ei - lig, jetzt fern und dann nah, jetzt fern und dann nah!
2. nicht ha - sehen, ich thu' dir kein Leid, ich thu' dir kein Leid.
3. ein Blümchen, so spräch' ich zu dir, so spräch' ich zu dir.
4. mein Herzchen, wie gut bin ich dir! wie gut bin ich dir!
8062

Header: Grundlagen

Struktur eines minimalen Headers

```
<meiHead>  
  <fileDesc>  
    <titleStmt>  
      <title></title>  
    </titleStmt>  
    <pubStmt></pubStmt>  
  </fileDesc>  
</meiHead>
```

Header: Grundlagen

Struktur eines minimalen Headers

```
<meiHead>  
  <fileDesc>  
    <titleStmt>  
      <title></title>  
    </titleStmt>  
    <pubStmt></pubStmt>  
  </fileDesc>  
</meiHead>
```

File Description (<fileDesc>)

Titel

```
<fileDesc>  
  <titleStmt>  
    <title>Schmetterling</title>  
  </titleStmt>  
  <pubStmt />  
</fileDesc
```

File Description (<fileDesc>)

Titel

```
<fileDesc>
  <titleStmt>
    <title>Schmetterling : eine elektronische
      Transkription</title>
  </titleStmt>
  <pubStmt />
</fileDesc>
```

File Description (<fileDesc>)

Beteiligte Personen

```
<fileDesc>
  <titleStmt>
    <title>Schmetterling : eine elektronische
    Transkription</title>
    <respStmt>
      <resp></resp>
      <persName></persName>
    </respStmt>
  </titleStmt>
  <pubStmt />
</fileDesc>
```

File Description (<fileDesc>)

Beteiligte Personen

```
<fileDesc>
  <titleStmt>
    <title>Schmetterling : eine elektronische
    Transkription</title>
    <respStmt>
      <resp>Komponiert von:</resp>
      <persName>Robert Schumann</persName>
    </respStmt>
  </titleStmt>
  <pubStmt />
</fileDesc>
```


File Description (<fileDesc>)

Beteiligte Personen

```
<fileDesc>
  <titleStmt>
    <title>Schmetterling : eine elektronische
    Transkription</title>
    <respStmt>
      <resp>Komponiert von:</resp>
      <persName>Robert Schumann</persName>
      <resp>Maschinenlesbare Transkription
      von:</resp>
      <persName>Max Mustermann</persName>
    </respStmt>
  </titleStmt>
  <pubStmt />
</fileDesc>
```

File Description (<fileDesc>)

Funktionsbezeichnungen von Personen

```
<titleStmt>
  <title>Schmetterling : eine elektronische
    Transkription</title>
  <respStmt>
    <resp role="composer">Komponiert
      von:</resp>
    <persName>Robert Schumann</persName>
    <resp role="encoder">Maschinenlesbare
      Transkription von:</resp>
    <persName>Max Mustermann</persName>
  </respStmt>
</titleStmt>
```

Terminologie der Funktionsbezeichnung: MARC Code List for Relators

File Description (<fileDesc>)

Funktionsbezeichnungen von Personen

```
<persName role="composer" authority="GND"  
  authURI="http://d-nb.info/gnd"  
  dbkey="118611666">Robert Schumann</persName>
```

Verwendete Normdatei für Personennamen: Gemeinsame Normdatei (GND)

File Description (<fileDesc>)

Status der Publikation

```
<fileDesc>
  <titleStmt>
    <title>Schmetterling : eine elektronische
      Transkription</title>
    <respStmt>
      ...
    </respStmt>
  </titleStmt>
  <pubStmt>
    <unpub/>
  </pubStmt>
</fileDesc>
```

File Description (<fileDesc>)

Erfassung von Quellen

```
<fileDesc>
  <titleStmt>
    <title>Schmetterling : eine elektronische
    Transkription</title>
    <respStmt>
      ...
    </respStmt>
  </titleStmt>
  <pubStmt>
    <unpub/>
  </pubStmt>
  <sourceDesc></sourceDesc>
</fileDesc>
```

Source Description (<sourceDesc>)

Container für einzelne Quellen

```
<fileDesc>
  ...
  <sourceDesc>
    <source n="1" xml:id="RS_op79_Mahlert" />
  </sourceDesc>
</fileDesc>
```

Source Description (<sourceDesc>)

Titel der Quelle

```
<fileDesc>
  ...
  <sourceDesc>
    <source n="1" xml:id="RS_op79_Mahlert">
      <titleStmt>
        <title type="main"/>
        <title type="uniform"/>
      </titleStmt>
    </source>
  </sourceDesc>
</fileDesc>
```

Source Description (<sourceDesc>)

Titel der Quelle

```
<fileDesc>
  ...
  <sourceDesc>
    <source n="1" xml:id="RS_op79_Mahlert">
      <titleStmt>
        <title type="main">Lieder-Album für
          die Jugend für Singstimme(n) und
          Klavier op. 79</title>
        <title type="uniform">Lieder für die
          Jugend</title>
      </titleStmt>
    </source>
  </sourceDesc>
</fileDesc>
```


Source Description (<sourceDesc>)

Beteiligte Personen

```
<fileDesc>
  ...
  <sourceDesc>
    <source n="1" xml:id="RS_op79_Mahlert">
      <titleStmt>
        <title type="main"/>
        <title type="uniform"/>
        <respStmt>
          <resp/>
          <persName/>
        </respStmt>
      </titleStmt>
    </source>
  </sourceDesc>
</fileDesc>
```

Source Description (<sourceDesc>)

Vermerk einer bestimmten Ausgabe

```
<fileDesc>
  ...
  <sourceDesc>
    <source n="1" xml:id="RS_op79_Mahlert">
      <titleStmt>
        ...
      </titleStmt>
      <editionStmt/>
    </source>
  </sourceDesc>
</fileDesc>
```

Source Description (<sourceDesc>)

Vermerk einer bestimmten Ausgabe

```
<fileDesc>
  ...
  <sourceDesc>
    <source n="1" xml:id="RS_op79_Mahlert">
      <titleStmt>
        ...
      </titleStmt>
      <editionStmt>
        <edition>Reprint der Erstausgabe
          Leipzig 1849</edition>
      </editionStmt>
    </source>
  </sourceDesc>
</fileDesc>
```

Source Description (<sourceDesc>)

Angaben zur Publikation der Quelle

```
<fileDesc>
  ...
  <sourceDesc>
    <source n="1" xml:id="RS_op79_Mahlert">
      <titleStmt>
        ...
      </titleStmt>
      <editionStmt>
        ...
      </editionStmt>
      <pubStmt />
    </source>
  </sourceDesc>
</fileDesc>
```

Source Description (<sourceDesc>)

Angaben zur Publikation der Quelle: Verlag

```
<fileDesc>
  ...
  <sourceDesc>
    <source n="1" xml:id="RS_op79_Mahlert">
      <titleStmt/>
      <editionStmt/>
      <pubStmt>
        <respStmt>
          <corpName>Breitkopf und
            Härtel</corpName>
        </respStmt>
      </pubStmt>
    </source>
  </sourceDesc>
</fileDesc>
```

Source Description (<sourceDesc>)

Angaben zur Publikation der Quelle: Verlagsort

```
<sourceDesc>
  <source n="1" xml:id="RS_op79_Mahlert">
    ...
    <pubStmt>
      <respStmt>
        <corpName>Breitkopf und
          Härtel</corpName>
      </respStmt>
      <address>
        <addrLine>Wiesbaden</addrLine>
        <addrLine>Deutschland</addrLine>
      </address>
    </pubStmt>
  </source>
</sourceDesc>
```

Source Description (<sourceDesc>)

Angaben zur Publikation der Quelle: Bestellnummer

```
<sourceDesc>
  <source n="1" xml:id="RS_op79_Mahlert">
    <titleStmt/>
    <editionStmt/>
    <pubStmt>
      ...
      <identifier/>
    </pubStmt>
  </source>
</sourceDesc>
```

Source Description (<sourceDesc>)

Angaben zur Publikation der Quelle: Bestellnummer

```
<sourceDesc>
  <source n="1" xml:id="RS_op79_Mahlert">
    <titleStmt/>
    <editionStmt/>
    <pubStmt>
      ...
      <identifier
        type="ordernumber">Breitkopf &
        Härtel 8307</identifier>
    </pubStmt>
  </source>
</sourceDesc>
```


Source Description (<sourceDesc>)

Angaben zur Verfügbarkeit der Quelle

```
<sourceDesc>
  <source n="1" xml:id="RS_op79_Mahlert">
    <titleStmt/>
    <editionStmt/>
    <pubStmt>
      ...
      <identifier/>
      <availability/>
    </pubStmt>
  </source>
</sourceDesc>
```

Source Description (<sourceDesc>)

Angaben zur Verfügbarkeit der Quelle

```
<sourceDesc>
  <source n="1" xml:id="RS_op79_Mahlert">
    <titleStmt/>
    <editionStmt/>
    <pubStmt>
      ...
      <identifier/>
      <availability>
        <useRestrict>© 1991 by Breitkopf
          & Härtel,
          Wiesbaden</useRestrict>
      </availability>
    </pubStmt>
  </source>
</sourceDesc>
```

Source Description (<sourceDesc>)

Physische Beschreibung der Quelle

```
<sourceDesc>  
  <source n="1" xml:id="RS_op79_Mahlert">  
    <titleStmt/>  
    <editionStmt/>  
    <pubStmt/>  
    <physDesc/>  
  </source>  
</sourceDesc>
```

Source Description (<sourceDesc>)

Physische Beschreibung der Quelle

```
<sourceDesc>
  <source n="1" xml:id="RS_op79_Mahlert">
    <titleStmt/>
    <editionStmt/>
    <pubStmt/>
    <physDesc>
      <dimensions></dimensions>
      <extent></extent>
      <plateNum></plateNum>
      ...
    </physDesc>
  </source>
</sourceDesc>
```

Source Description (<sourceDesc>)

Ist die Quelle Teil einer Reihe?

```
<sourceDesc>
  <source n="1" xml:id="RS_op79_Mahlert">
    <titleStmt/>
    <editionStmt/>
    <pubStmt/>
    <physDesc/>
    <seriesStmt/>
  </source>
</sourceDesc>
```

Source Description (<sourceDesc>)

Reihenangabe

```
<sourceDesc>
  <source n="1" xml:id="RS_op79_Mahlert">
    <titleStmt/>
    <editionStmt/>
    <pubStmt/>
    <physDesc/>
    <seriesStmt>
      <title/>
      <respStmt>
        <resp/>
        <persName/>
      </respStmt>
    </seriesStmt>
  </source>
</sourceDesc>
```

Source Description (<sourceDesc>)

Sachliche Erschließung

```
<sourceDesc>
  <source n="1" xml:id="RS_op79_Mahlert">
    <titleStmt/>
    <editionStmt/>
    <pubStmt/>
    <physDesc/>
    <seriesStmt/>
    <classification>
      <classCode/>
    </classification>
  </source>
</sourceDesc>
```

Source Description (<sourceDesc>)

Sachliche Erschließung

```
<sourceDesc>
  <source n="1" xml:id="RS_op79_Mahlert">
    ...
    <classification>
      <termList>
        <term classcode="#DNB_Sachgruppen">
          <identifier>02a</identifier>
          <term>Werke für
            Einzelstimmen</term>
        </term>
      </termList>
      <classCode xml:id="DNB_Sachgruppen">
    </classification>
  </source>
</sourceDesc>
```


Source Description (<sourceDesc>)

Inhalt

```
<sourceDesc>
  <source n="1" xml:id="RS_op79_Mahlert">
    <titleStmt/>
    <editionStmt/>
    <pubStmt/>
    <physDesc/>
    <seriesStmt/>
    <classification>
      <classCode/>
    </classification>
    <contents/>
  </source>
</sourceDesc>
```

Source Description (<sourceDesc>)

Inhalt

```
<sourceDesc>
  <source n="1" xml:id="RS_op79_Mahlert">
    ...
    <classification>
      <classCode/>
    </classification>
    <contents>
      <contentItem>1. Der Abendstern</contentItem>
      <contentItem>2. Schmetterling</contentItem>
      ...
    </contents>
  </source>
</sourceDesc>
```

Work Description (<workDesc>)

Erschließung des Werkes, das codiert wird

```
<meiHead>  
  <fileDesc>  
    <titleStmt>  
      <title/>  
    </titleStmt>  
    <pubStmt/>  
    <sourceDesc/>  
  </fileDesc>  
  <workDesc></workDesc>  
</meiHead>
```

Work Description (<workDesc>)

Container für einzelne Werke

```
<workDesc>  
  <work xml:id="op.79_2"></work>  
</workDesc>
```

Work Description (<workDesc>)

Tonart, Taktart, Tempoangabe

```
<workDesc>
  <work xml:id="op.79_2">
    <titleStmt>
      <title/>
      <respStmt/>
    </titleStmt>
    <key>D major</key>
    <tempo>Schnell.</tempo>
    <meter count="3" unit="8"/>
  </work>
</workDesc>
```

Work Description (<workDesc>)

Angaben zur Besetzung

```
<workDesc>  
  <work xml:id="op.79_2">  
    <titleStmt>  
      <title/>  
      <respStmt/>  
    </titleStmt>  
    <key/>  
    <tempo/>  
    <meter/>  
    <perfMedium/>  
  </work>  
</workDesc>
```

Work Description (<workDesc>)

Angaben zur Besetzung

```
<workDesc>
  <work xml:id="op.79_2">
    ...
    <key/>
    <tempo/>
    <meter/>
    <perfMedium>
      <instrumentation>
        <instrVoice n="1">Singstimme.</instrVoice>
        <instrVoice n="2">Pianoforte.</instrVoice>
      </instrumentation>
    </perfMedium>
  </work>
</workDesc>
```

Work Description (<workDesc>)

Sachliche Erschließung des Werkes

```
<workDesc>
  <work xml:id="op.79_2">
    ...
    <perfMedium>
      <instrumentation>
        <instrVoice n="1">Singstimme.</instrVoice>
        <instrVoice n="2">Pianoforte.</instrVoice>
      </instrumentation>
    </perfMedium>
    <classification>
      <classCode/>
    </classification>
  </work>
</workDesc>
```


Work Description (<workDesc>)

Incipit

```
<workDesc>
  <work xml:id="op.79_2">
    ...
    <perfMedium>
      ...
    </perfMedium>
    <incip>
      <incipText></incipText>
      <incipCode></incipCode>
      <score></score>
    </incip>
  </work>
</workDesc>
```

Revision Description (<revisionDesc>)

Vermerk von Änderungen an der Datei

```
<meiHead>
  <fileDesc>
    ...
  </fileDesc>
  <workDesc/>
  <revisionDesc>
    <change>
      <respStmt></respStmt>
      <changeDesc>
        <p></p>
      </changeDesc>
      <date></date>
    </change>
  </revisionDesc>
</meiHead>
```

Revision Description (<revisionDesc>)

Container für Änderungen (<change>)

```
<meiHead>
  ...
  <revisionDesc>
    <change n="1">
      <respStmt>
        <persName>Max Mustermann</persName>
      </respStmt>
      <changeDesc>
        <p>Anlegen der Datei und Codierung des
          Headers</p>
      </changeDesc>
      <date isodate="2012-09-18" />
    </change>
  </revisionDesc>
</meiHead>
```

MEI-Music

<music></music>

Music: Grundlagen



`<note pname="c" oct="4" dur="4"/>`

Music: Punktierung



```
<note pname="c" oct="4" dur="4" dots="1"/>
```

Music: Vorzeichen



```
<note pname="e" accid="f" oct="4" dur="4"/>
```



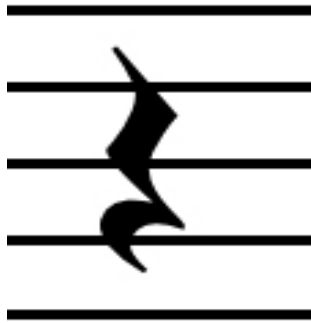
```
<note pname="c" oct="5" dur="2">  
  <accid accid="s"/>  
</note>
```

Music: Balkung

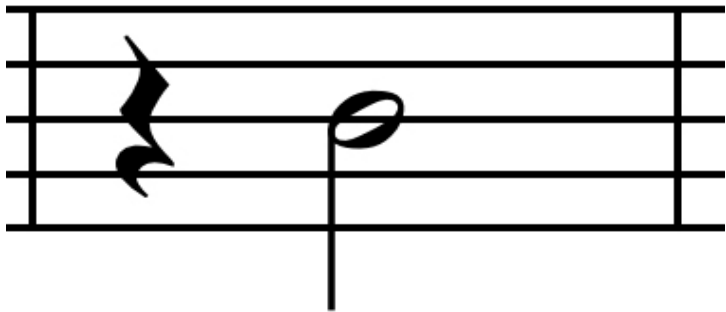


```
<beam>  
  <note pname="f" oct="4" dur="8"/>  
  <note pname="e" oct="4" dur="8"/>  
</beam>  
<beam>  
  <note pname="b" oct="4" dur="8"/>  
  <note pname="c" oct="5" dur="8"/>  
</beam>  
<beam>  
  <note pname="a" oct="4" dur="8"/>  
  <note pname="f" oct="4" dur="8"/>  
</beam>
```


Music: Pausen



<rest dur="4"/>



<rest dur="4"/>

<note pname="b" oct="4" dur="2"/>

Music: Schmetterling



Bitte codieren Sie das Beispiel innerhalb eines layers!

Music: Codierung

<layer>

<note pname="d" oct="5" dur="8" stem.dir="down"/>

<note pname="e" oct="5" dur="4" stem.dir="down"/>

<note pname="f" oct="5" dur="4" stem.dir="down"/>

</layer>

Music: Schmetterling II



Schmet- ter- ling

Music: Codierung mit Text

```
<layer>
```

```
<note pname="d" oct="5" dur="4" stem.dir="up" syl="Schmet-"/>
```

```
<note pname="e" oct="5" dur="4" stem.dir="up" syl="ter-"/>
```

```
<note pname="f" oct="5" dur="4" stem.dir="up" syl="ling"/>
```

```
</layer>
```

Music: eine andere Möglichkeit...

```
<layer>
  <note pname="d" oct="5" dur="8" stem.dir="down">
    <verse n="1">
      <syl con="d" wordpos="i">Schmet</syl>
    </verse>
  </note>
  <note pname="e" oct="5" dur="8" stem.dir="down">
    <verse n="1">
      <syl con="d">ter</syl>
    </verse>
  </note>
  <note pname="e" oct="5" dur="8" stem.dir="down">
    <verse n="1">
      <syl wordpos="t">ling</syl>
    </verse>
  </note>
</layer>
```

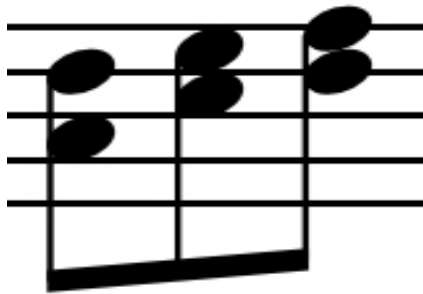
Music: Vollständiger Takt



Schmet- ter- ling

```
<measure>  
  <staff>  
    <layer>  
      <note pname="d" oct="5" dur="4" stem.dir="down"  
        syl="Schmet-"/>  
      <note pname="e" oct="5" dur="4" stem.dir="down"  
        syl="ter-"/>  
      <note pname="f" oct="5" dur="4" stem.dir="down"  
        syl="ling"/>  
    </layer>  
  </staff>  
</measure>
```

Music: Akkorde



```
<beam>  
  <chord dur="8"  
    stem.dir="down">  
    <note pname="a" oct="4"/>  
    <note pname="d" oct="5"/>  
  </chord>  
  <chord dur="8"  
    stem.dir="down">  
    <note pname="c" oct="5"/>  
    <note pname="e" oct="5"/>  
  </chord>  
  <chord dur="8"  
    stem.dir="down">  
    <note pname="d" oct="5"/>  
    <note pname="f" oct="5"/>  
  </chord>  
</beam>
```


Music: staff Definition



```
<staffDef n="1" lines="5" clef.line="2" clef.shape="G"  
meter.count="3" meter.unit="8" key.sig="2s"/>
```

Music: Score Definition



```
<scoreDef meter.count="3" meter.unit="8"  
  key.sig="2s">  
  <staffGrp>  
    <staffGrp>  
      <staffDef n="1" lines="5"  
        clef.line="2" clef.shape="G" />  
    </staffGrp>  
    <staffGrp symbol="brace">  
      <staffDef n="2" lines="5"  
        clef.line="2" clef.shape="G"/>  
      <staffDef n="3" clef.shape="F"  
        clef.line="4" lines="5"/>  
    </staffGrp>  
  </staffGrp>  
</scoreDef>
```

Music: Der Auftakt vom Schmetterling

The image shows a musical score for a piece titled 'Der Auftakt vom Schmetterling'. The score is written for a single melodic line in the upper staff and a piano accompaniment in the lower staves. The key signature is one sharp (F#) and the time signature is 3/8. The upper staff begins with a treble clef, a key signature of one sharp, and a 3/8 time signature. The first measure contains a quarter note G4. The lower staves begin with a grand staff (treble and bass clefs), a key signature of one sharp, and a 3/8 time signature. The first measure contains a quarter note G4 in the treble staff and a quarter note G2 in the bass staff. A piano dynamic marking (*p*) is placed between the two staves in the first measure.

Codieren Sie eine scoreDef sowie Pausen und Noten in den entsprechenden Takten!

Music: Dynamik und Artikulation



Ein Beispiel:

```
<layer>  
  <note pname="a" oct="4" dur="8"  
    stem.dir="up" artic="stacc"/>  
  <dynam place="below">p</dynam>  
  <dir place="above">Schnell</dir>  
</layer>
```

Music: „Container für die Musik“

<music>

Das **music**-Element enthält den vollständigen Musikteil

<body>

Das **body**-Element enthält einen oder mehr Segmente der Musik

<mdiv>

mdiv= Musical division

<score>

Das **score**-Element definiert z.B. eine Partitur

<section>

Im **section**-Element ein Abschnitt der Musik

</section>

</score>

</mdiv>

</body>

</music>

Music: einzelne Stimmen

```
<music>  
  <body>  
    <mdiv>  
      <part>  
        <parts>  
          <section>  
            </section>  
          </parts>  
        </part>  
      </mdiv>  
    </body>  
  </music>
```

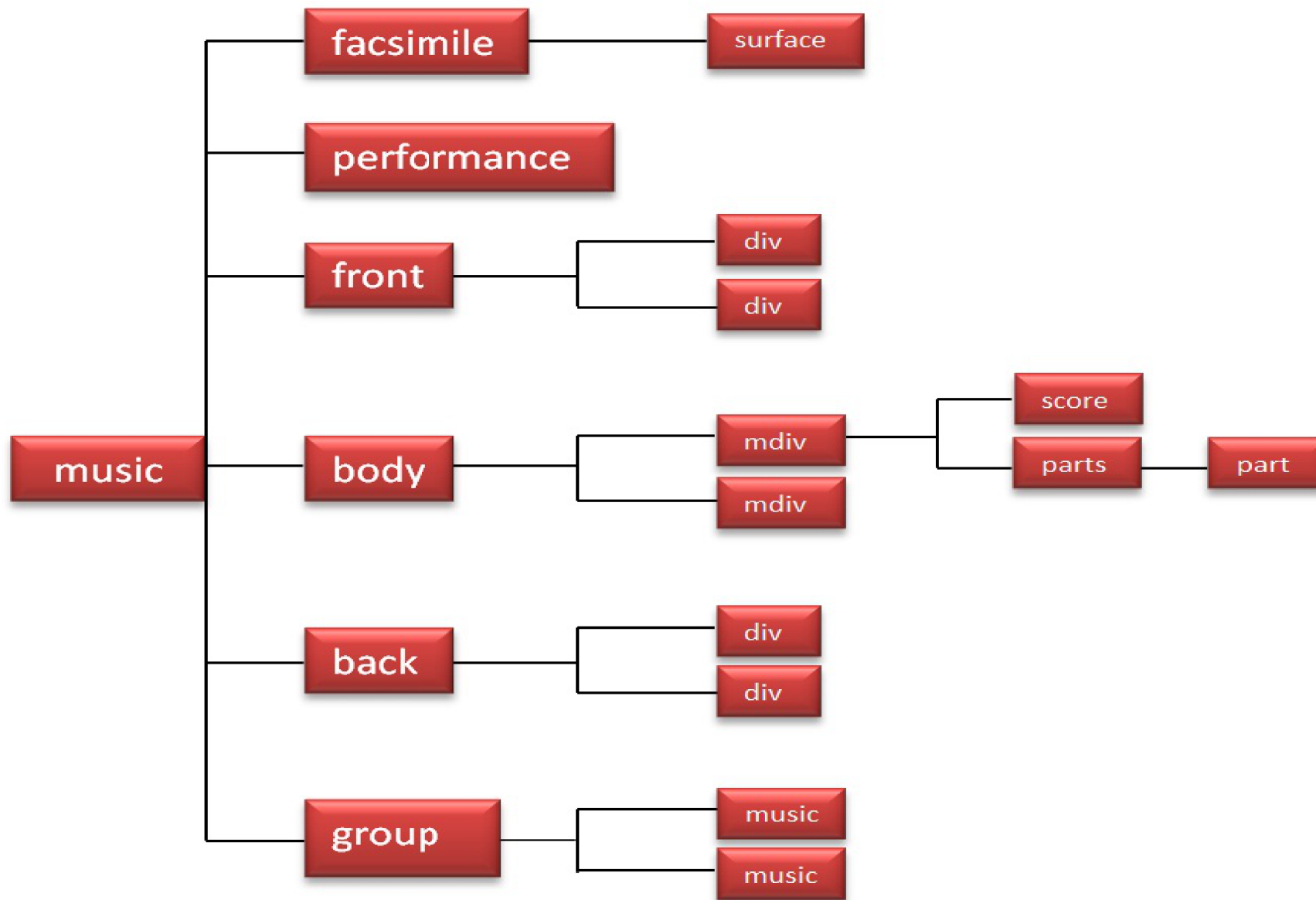
Das part-Element ermöglicht die Codierung einzelner Stimmen

Music: Ein Beispiel

```
<music n="opera">
  <body>
    <mdiv n="act_1">
      <mdiv n="scene_1">
        <score/>
      </mdiv>
    <mdiv n="act_2">
      <mdiv n="scene_1">
        <score/>
      </mdiv>
    </mdiv>
    <mdiv n="act_3">
      <score/>
    </mdiv>
  </mdiv>
</body>
</music>
```

„Struktur“ einer Oper mit 3 Akten
und in den ersten beiden mit
jeweils einer Szene

Music: <music>



Music: Der Weg zur einzelne Note

```
<music>  
  <body>  
    <mdiv>  
      <score>  
        <section>  
          <measure>  
            <staff>  
              <layer>  
                <note/>  
              </layer>  
            </staff>  
          </measure>  
        </section>  
      </score>  
    </mdiv>  
  </body>  
</music>
```

Music: Artikulation



Mögliche Codierung:

1. `<note artic="acc"/>`

2. `<note>`
 `<artic artic="acc"/>`
 `</note>`

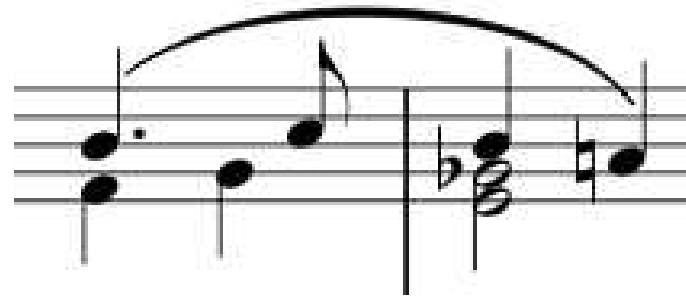
Music: Bögen



Waf - fen.
trof - fen.

The image shows a musical score for voice and piano. The voice part has two lines of lyrics: "Waf - fen." and "trof - fen.". A slur is placed over the first two notes of the voice line, extending across a barline. The piano accompaniment is shown on two staves below the voice part.

One-pass-encoding and standoff-markup



The image shows a musical score on a single staff. A slur is placed over a sequence of notes that spans across a barline, illustrating the concept of a slur across the barline.

Slur across the barline

Music: Mögliche Codierung

- One-pass-encoding



Waf ——— - fen.
trof ——— - fen.

The image shows two staves of musical notation. The top staff has a treble clef and a key signature of one flat. It contains a melodic line with a slur over the first two notes. The bottom staff has a bass clef and contains a harmonic line with a slur over the first two notes. The lyrics 'Waf' and 'trof' are written below the first staff, and 'fen.' is written below the second staff, with horizontal lines indicating the alignment of the notes with the lyrics.

```
<layer>  
  <note pname="e" oct="4" dur="8"  
    stem.dir="down" slur="i1"/>  
  <note pname="d" oct="4" dur="4"  
    stem.dir="down"/>  
  <note pname="c" oct="4" dur="8"  
    stem.dir="down" slur="t1"/>  
</layer>
```

Music: Mögliche Codierung II

- standoff-markup



```
<staff>
  <layer>
    <note pname="e" oct="3"
      dur="8" xml:id="note_1"/>
    <note pname="a" oct="3"
      dur="4" xml:id="note_2"/>
    <note pname="g" oct="3"
      dur="8" xml:id="note_3"/>
  </layer>
</staff>
<slur staff="2" curvedir="above"
  startid="#note_1" endid="#note_3"/>
```

Music: Mögliche Codierung III

```
<measure>  
  <staff>  
    <layer>  
      <note/>  
      <note/>  
    </layer>  
  </staff>  
</measure>  
<measure>  
  <staff>  
    <layer>  
      <note/>  
      <note/>  
    </layer>  
  </staff>  
  <slur staff="1" layer="1" dur="1m+2" curvedir="above"/>  
</measure>
```



Music: Text

The image shows a musical score for two verses of a hymn. The score is written on two staves, with the vocal line on top and the piano accompaniment on the bottom. The lyrics are written below the vocal line. The first verse is: "Ein' Er fe - ste Burg ist un - ser Gott, ein' hilft uns frei aus al - ler Not, die". The second verse is: "Ein' Er fe - ste Burg ist un - ser Gott, ein' hilft uns frei aus al - ler Not, die". The music is in a major key, indicated by a sharp sign on the F line of the piano staff. The tempo is marked "Allegro".

Ein' Er fe - ste Burg ist un - ser Gott, ein' hilft uns frei aus al - ler Not, die

Encoding of two verses

Music: 2 Verse

```
<layer n="1">  
  <note pname="d" oct="5" dur="4" stem.dir="up">  
    <verse n="1">  
      <syl>Ein´</syl>  
    </verse>  
    <verse n="2">  
      <syl>Er</syl>  
    </verse>  
  </note>  
</layer>
```


Music: Ornamentation



<arpeg/>


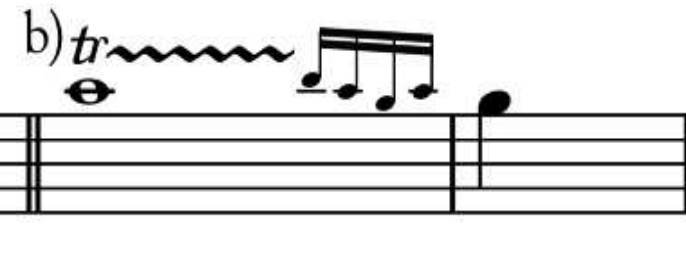


<note grace="unacc" size="cue"/>



<hairpin/>

Music: Triller und anderes

a) *tr*  b) *tr* 

```
<trill>  
<note></note>  
</trill>
```



```
<tuplet num="3">  
<note/>  
<note/>  
<note/>  
</tuplet>
```

Andante



Music: Ossia

```
<measure>
  <ossia>
    <staff n="ossia">
      <!-- content of the alternative staff -->
      <layer>
        <note pname="e" oct="4" dur="4" stem.dir="up"/>
        <beam>
          <note pname="g" oct="4" dur="8" stem.dir="up"/>
          <note pname="f" oct="4" dur="8" stem.dir="up"/>
        </beam>
        <note pname="e" oct="4" dur="4" stem.dir="up"/>
      </layer>
    </staff>
    <staff n="1">
      <!-- content of the original staff -->
      <layer>
        <note pname="e" oct="4" dur="4" stem.dir="up"/>
        <note pname="f" oct="4" dur="4" stem.dir="up"/>
        <note pname="e" oct="4" dur="2" stem.dir="up"/>
      </layer>
    </staff>
  </ossia>
</measure>
```

Music: Was ist hier falsch?

```
<section>
  <measure>
    <staff>
      <note pname="e" oct="4" dur="4"/>
      <note pname="d" oct="4" dur="4"/>
      <note pname="f" accid="s" oct="4" dur="4"/>
      <note pname="a" oct="4" dur="4"/>
    </staff>
  </measure>
</section>
```

<workshop/>